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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/546,936	04/11/2000	Jui-Ping Li	1056-52	4254

7590 01/07/2003

Laff Whitesel & Saret LTD  
Attorneys at Law  
401 N Michigan Avenue  
Chicago, IL 60611

EXAMINER

MOORE, KARLA A

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 01/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Interview Summary

Application No.

09/546,936

Applicant(s)

LI ET AL.

Examiner

Karla Moore

Art Unit

1763

All participants (applicant, applicant's representative, PTO personnel):

(1) Karla Moore. (3) \_\_\_\_\_.

(2) J. Warren Whitesell. (4) \_\_\_\_\_.

Date of Interview: 11/6/02 & 12/20/02.

Type: a) ☒ Telephonic b) ☐ Video Conference  
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.  
If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: independent claim 1.

Identification of prior art discussed: 6,139,642 Shimahara et al..

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: See Continuation Sheet.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

i) ☒ It is not necessary for applicant to provide a separate record of the substance of the interview (if box is checked).

Unless the paragraph above has been checked, THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

\_\_\_\_\_  
Examiner's signature, if required

## Summary of Record of Interview Requirement

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

#### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

##### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

##### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case unless both applicant and examiner agree that the examiner will record same. Where the examiner agrees to record the substance of the interview, or when it is adequately recorded on the Form or in an attachment to the Form, the examiner should check the appropriate box at the bottom of the Form which informs the applicant that the submission of a separate record of the substance of the interview as a supplement to the Form is not required.

It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

#### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments:

Applicant's attorney requested interview to discuss why Applicant's believe invention is not anticipated by Shimahara et al. Proposed claims and comparison drawings (attached) were faxed to Examiner for review. Applicant's main contention is that the gas flow of the present invention differs from that of Shimahara et al. Examiner was not convinced that the claims, as proposed, distinguish the claimed invention over the prior art. Examiner has suggested that Applicant's add structural limitations physically describing the gas feeding pipe, in order to define over prior art reference.

**MICHAEL BEST  
& FRIEDRICH** LLC  
*Attorneys at Law*

www.mbf-law.com

**Michael Best & Friedrich LLC**  
**Chicago Office**  
401 N. Michigan Avenue  
Suite 1900  
Chicago, IL 60611  
Telephone (312) 222-0800  
FAX (312) 222-0818**FACSIMILE TRANSMISSION****DATE:** November 13, 2002**TO:**

NAME	FAX NO.	PHONE NO.
Karla A. Moore, Examiner United States Patent and Trademark Office	703-746-7597	

**FROM:** J. Warren Whitesel**PHONE:** (312) 661-2144**RE:** U.S. Patent Application No. 09/546,936, Group Art Unit 1763

NUMBER OF PAGES, INCLUDING COVER:	
CLIENT MATTER NUMBER:	201056-0052

**NOTES/COMMENTS:**

Please review the attached six sheets and call me. This is a rough draft which is not intended to be a response to your office action. Rather, it suggests what the response will say. This application is under final. I would like to make any amendments that are necessary before I file the formal amendment.

THE INFORMATION CONTAINED IN THIS FACSIMILE IS INTENDED ONLY FOR THE PERSONAL AND CONFIDENTIAL USE OF THE DESIGNATED RECIPIENTS NAMED ABOVE. THIS MESSAGE MAY BE AN ATTORNEY-CLIENT COMMUNICATION, OR MAY BE PROPRIETARY CONFIDENTIAL INFORMATION OF A CLIENT, AND AS SUCH IS PRIVILEGED AND CONFIDENTIAL. IF THE READER OF THIS MESSAGE IS NOT THE INTENDED RECIPIENT OR ANY AGENT RESPONSIBLE FOR DELIVERING IT TO THE INTENDED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT YOU HAVE RECEIVED THIS DOCUMENT IN ERROR, AND THAT ANY REVIEW, DISSEMINATION, DISTRIBUTION OR COPYING OF THIS MESSAGE IS STRICTLY PROHIBITED. IF YOU HAVE RECEIVED THIS COMMUNICATION IN ERROR, PLEASE NOTIFY US IMMEDIATELY BY TELEPHONE AND RETURN THE ORIGINAL MESSAGE TO US BY MAIL. THANK YOU.

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**MICHAEL BEST  
& FRIEDRICH, LLC**  
*Attorneys at Law*

www.mbf-law.com

401 North Michigan Avenue  
Chicago, Illinois 60611  
Telephone (312) 661-2100  
FAX (312) 661-0029

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Milwaukee, Wisconsin  
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Writer's Direct Line: (312) 661-2144  
Email: jwwhitesel@mbf-law.com

November 8, 2002

**DRAFT**

Ms. Karla A. Moore, Examiner  
United States Patent and Trademark Office  
Washington, D.C. 20231

Re: U.S. Patent Application No. 09/546,936  
Title: Apparatus for Forming Film...the Same Apparatus  
Inventor(s): Jui-Ping Li et al.; Assignee: Mosel Vitelic, Inc.  
Client Ref: PECA05178/1585; Our Ref: 201056-0052

Dear Ms. Moore:

Thank you for the interview on November 5, 2002.

When studying this application, it is easy to get caught up in mechanical hardware. It then becomes difficult to remember that the object of the invention is to provide a superior chemical vapor deposition (CVD) during the manufacturing of a semiconductor device.

When viewed in this light, the mechanical hardware must be judged on such things as gas turbulence, convection current, contamination, or uniformity of the semiconductor produced by the CVD process. The first few pages of the applications' specification describe some of the concerns. Likewise, cols. 1-9 of Shimahara et al. set forth their concerns.

Accordingly, the hardware limitations in applicants' claims are designed to produce a superior product made by a CVD process. There are two concerns. (1) the CVD process tends to produce a film which can peel, flake, and contaminate the layer being deposited by CVD. (2) The smooth flow of gas during the CVD process can be disturbed by convection currents, turbulence and the like.

Shimahara et al have similar concerns, but their gas flow pattern is totally different from applicants' gas flow pattern. The attached Figs. were prepared in Taiwan in order to illustrate the differences between applicants' gas flow pattern and the Shimahara et al gas flow pattern. Applicants' pattern heats the gas somewhat before it

**MICHAEL BEST  
& FRIEDRICH LLC**  
*Attorneys at Law*

Ms. Karla A. Moore  
November 8, 2002  
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hits the hottest surfaces. Shimahara et al's gas flow pattern blasts the cold gas directly onto the hot surface.

Also attached are some claims which have been marked up according to our comments during the interview.

**Please call me and give me any feedback which you may care to give, and in particular your reaction to the proposed claim amendments.**

Sincerely,

**MICHAEL BEST & FRIEDRICH LLC**

  
J. Warren Whitesel

JWW/mam  
Enclosure

S:\CLIENT\201056\0052\VC0164181.1

Dkt No. 201056-0052  
U.S. Serial No. 09/546,936

RESPONSE TO OFFICE ACTION  
(Paper No. 2), MAILED JANUARY 30, 2002

Responsive to Office Action (Paper No. 2) mailed January 30, 2002, please amend  
the application, as follows:

IN THE CLAIMS:

1. (AMENDED) An apparatus for forming a film on a wafer in a semiconductor  
process comprising:

an inner part for mounting therein said wafer,

an outer part covering said inner part wherein a gas inlet and a gas outlet are

formed between said inner part and said outer part; and

*A HEATER FOR HEATING SAID APPARATUS SO THAT SAID OUTER PART IS COOLER  
THAN SAID INNER PART, AND*

a gas-feeding pipe partially mounted inside said gas inlet for adjusting a feeding  
gas flowing therein in a direction toward said outer part instead of said inner part in order

to prevent particles adhered to said inner part from peeling off,

*WHEREBY SAID FEEDING GAS IS SHOOTLY WARMED BEFORE STRIKING  
SAID HOTTER INNER PART.*

12. (AMENDED) A gas-feeding device for feeding a gas into a film-forming  
apparatus having an inner part and an outer part to form a film on a wafer mounted in  
said inner part, the temperature difference between said gas and said inner part being in  
a ranged from 300 °C to 850 °C, said device comprising:

DRAFT



Dkt No. 201056-0052  
U.S. Serial No. 09/546,936

a gas-feeding pipe partially mounted between said inner part and said outer part  
for adjusting said gas flowing therein in the direction toward said outer part in order to  
prevent particles adhered to said inner part from peeling off; <sup>HOTTER</sup> AND

a flow controller connected to said gas-feeding pipe for controlling a flow rate of  
said gas.

18. (AMENDED) A method for feeding a gas into a film-forming apparatus having  
an inner part and an outer part to form a film on a wafer mounted in said inner part in a  
semiconductor process, <sup>SAID INNER PART BEING HOTTER THAN SAID OUTER PART</sup> comprising steps of:

(a) feeding said gas into a space between said outer part and said inner part,  
<sup>DIRECTING A FLOW OF SAID GAS</sup> and in a direction toward said outer part in order to prevent particles adhered to said inner  
part from peeling off; and <sup>HOTTER</sup>

(b) leading said gas into said inner part along a path between said outer part  
and said inner part, <sup>SO THAT SAID GAS WARMS BEFORE REACHING SAID HOTTER INNER PART.</sup>

19. (AMENDED) The method according to claim 18 wherein said semiconductor  
process is <sup>IS SELECTED FROM A GROUP CONSISTING</sup> of chemical vapor deposition process or physical vapor deposition  
process.

DRAFT

The Shimahara's invention

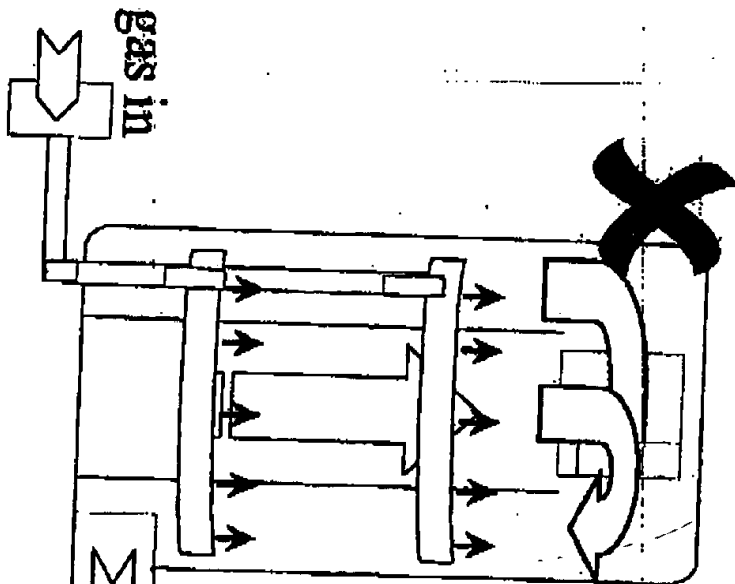


Fig. 2(a)

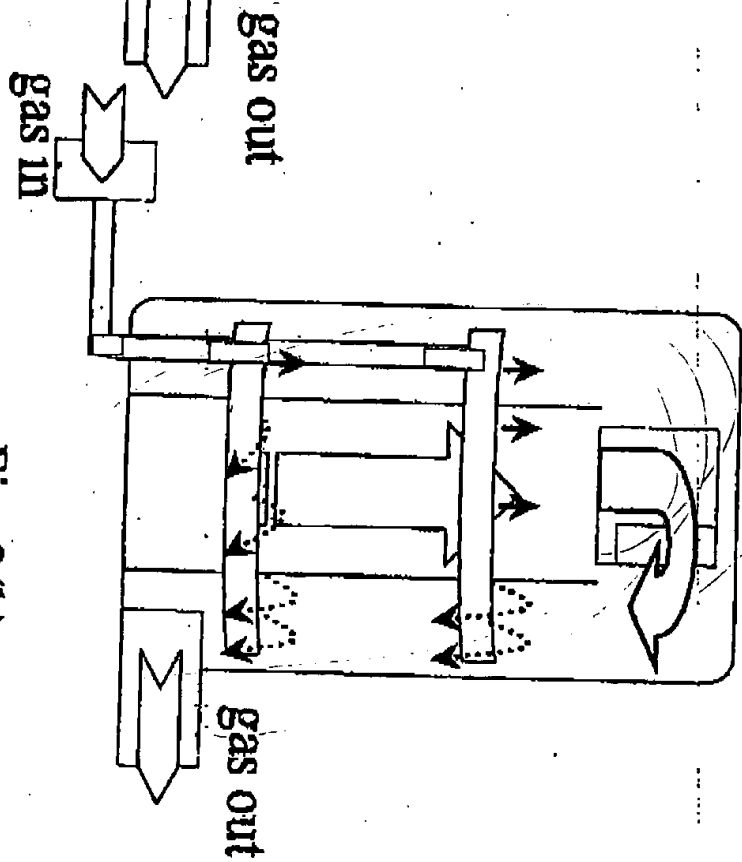
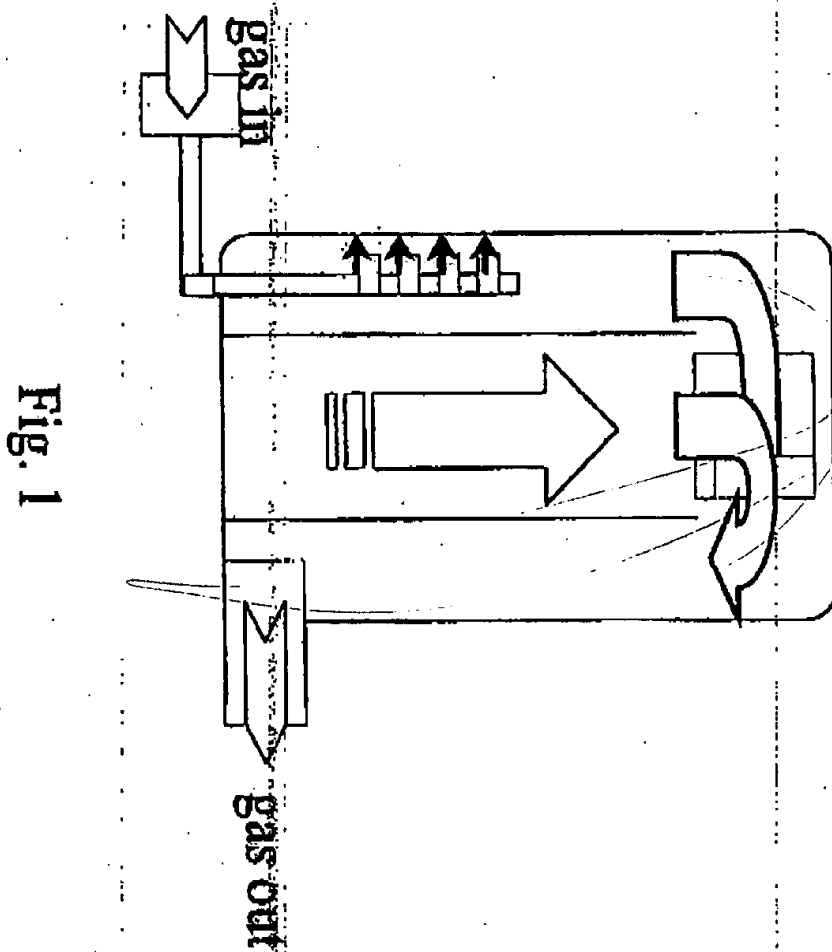


Fig. 2(b)

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# Fax Cover Sheet

**Date:** 29 Jan 2003

<b>To:</b> Mr. Perry Hoffman	<b>From:</b> Karla Moore
<b>Application/Control Number:</b> 09/546,936	<b>Art Unit:</b> 1763
<b>Fax No.:</b> 312.222.0818	<b>Phone No.:</b> 703.305.3142
<b>Voice No.:</b> 312-661-2100	<b>Return Fax No.:</b> 703.872.9310
<b>Re:</b> Requested copy of Interview Summary	<b>CC:</b>
<input type="checkbox"/> <b>Urgent</b> <input checked="" type="checkbox"/> <b>For Review</b> <input type="checkbox"/> <b>For Comment</b> <input type="checkbox"/> <b>For Reply</b> <input checked="" type="checkbox"/> <b>Per Your Request</b>	

**Comments:**

Attached is the Interview Summary we discussed. Please call if you have questions and/or would like to set up a telephone interview.

**Number of pages** 12 **including this page**

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